

## ABSTRACT

A process for producing olefin by catalytic cracking of hydrocarbon material characterized in employing zeolite of penta-sil type comprising  
5 rare earth elements and at least one of manganese or zirconium as a catalyst. It enables to produce light olefin such as ethylene, propylene, and so on with selectively high yield and with long term stability, by catalytic cracking of gaseous or liquid hydrocarbon as ingredients under lower temperature than the conventional method and suppressing  
10 by-product such as aromatic hydrocarbon or heavy substances.